VMware vCloud® Air™

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Agenda

- **vCloud Air**
  - What is it?
  - Value proposition to CEN members

- **vCloud Air cloud services**
  - IaaS
  - Disaster Recovery-as-a-Service (DRaaS)
  - Object Based Storage-as-a-Service
  - Desktop-as-a-Service (DaaS)

  - **Q & A session**
  - **Next steps and follow up**
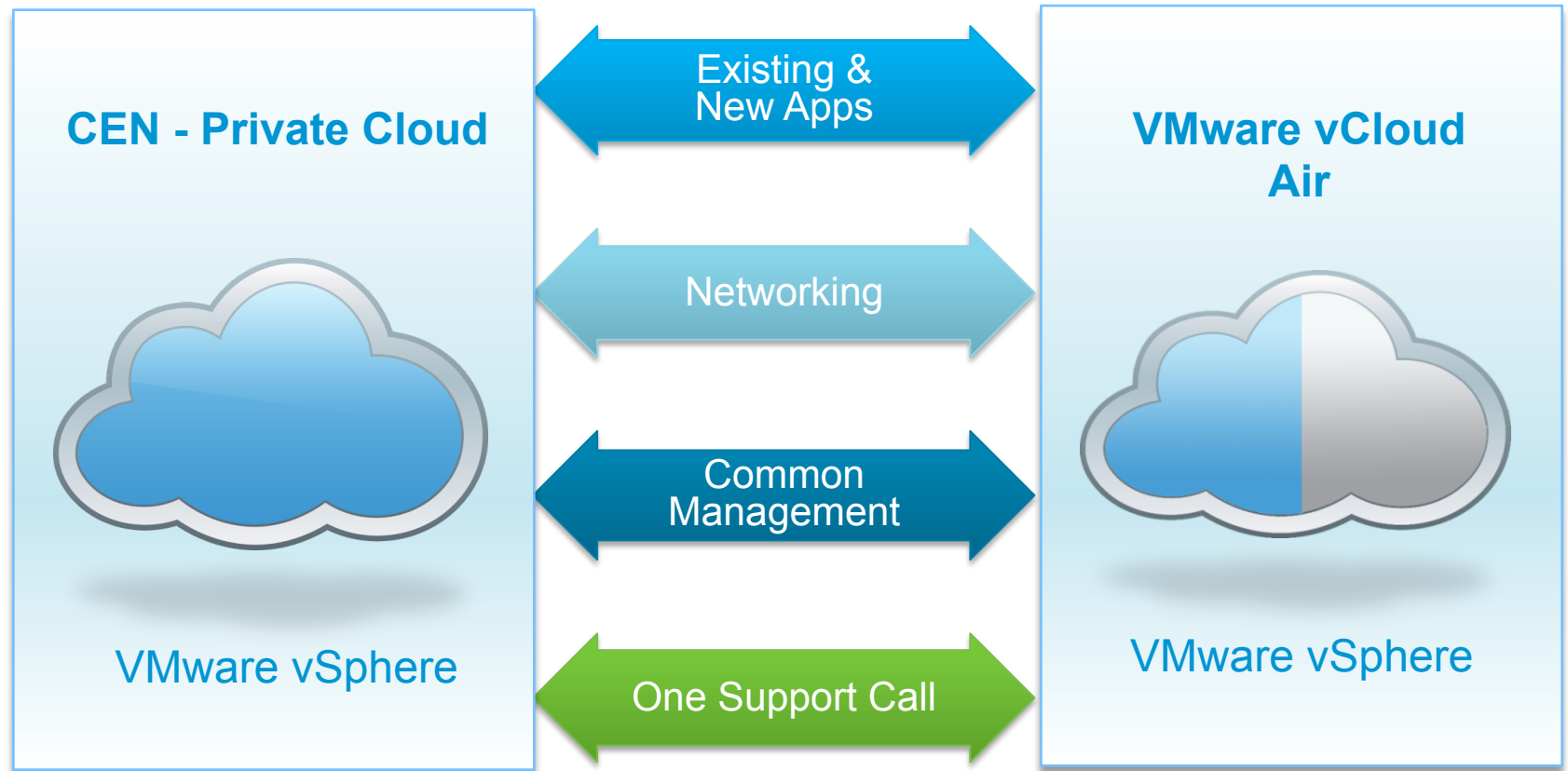
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VMware vCloud Air: *What is it?*

VMware vCloud® Air™ is a secure infrastructure-as-a-service hybrid cloud operated by VMware, ***built on the trusted foundation of vSphere.***

The service supports both existing workloads as well as new application development, ***giving IT a common platform to seamlessly extend their data center to the cloud leveraging the same staff, tools, and processes they use today.***
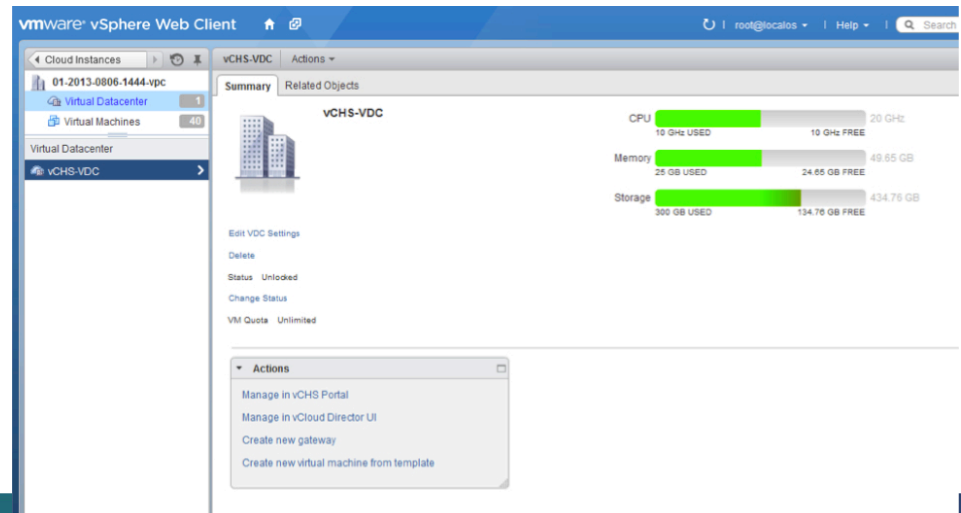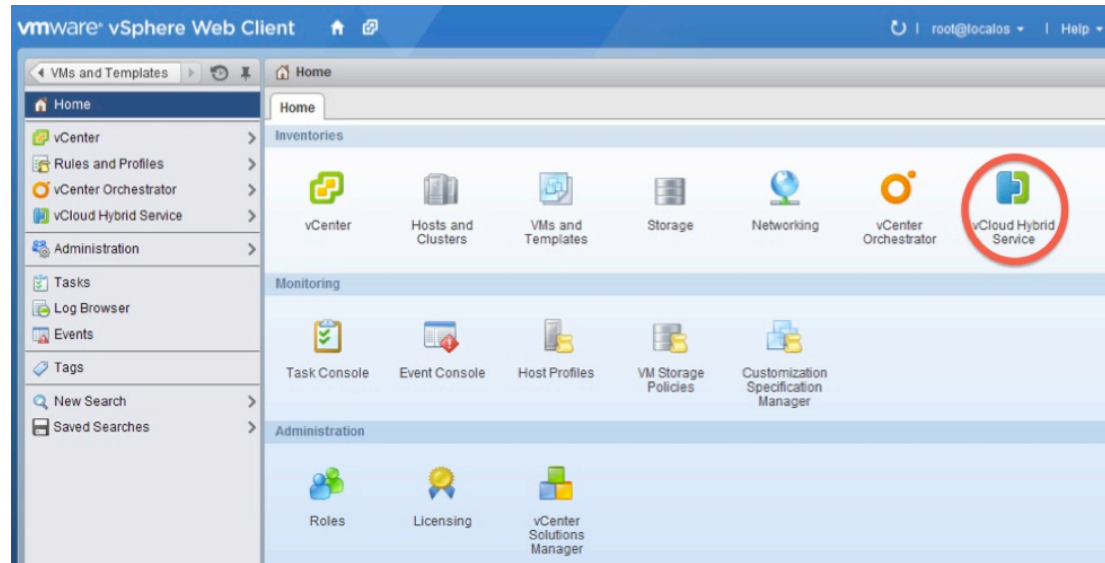
1. *IaaS*
2. *Disaster Recovery-as-a-Service (DRaaS)*
3. *Desktop-as-a-Service (DaaS)*
4. *Object Based Storage-as-Service*

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vCloud Air = The True Hybrid Cloud

CEN - Private Cloud

Existing & New Apps

Networking

Common Management

One Support Call

VMware vCloud Air

VMware vSphere

VMware vSphere

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Single Pane Glass – vCloud Air Plugin for vSphere Web Client

- **Leverage the extensibility of the vSphere webclient**

- **Common single management client for vSphere admins**

- **View and deploy catalog templates**

- **View and manage VMs**

- **View and manage networks and gateways**

vCloud Air: Three Compute Service Offerings

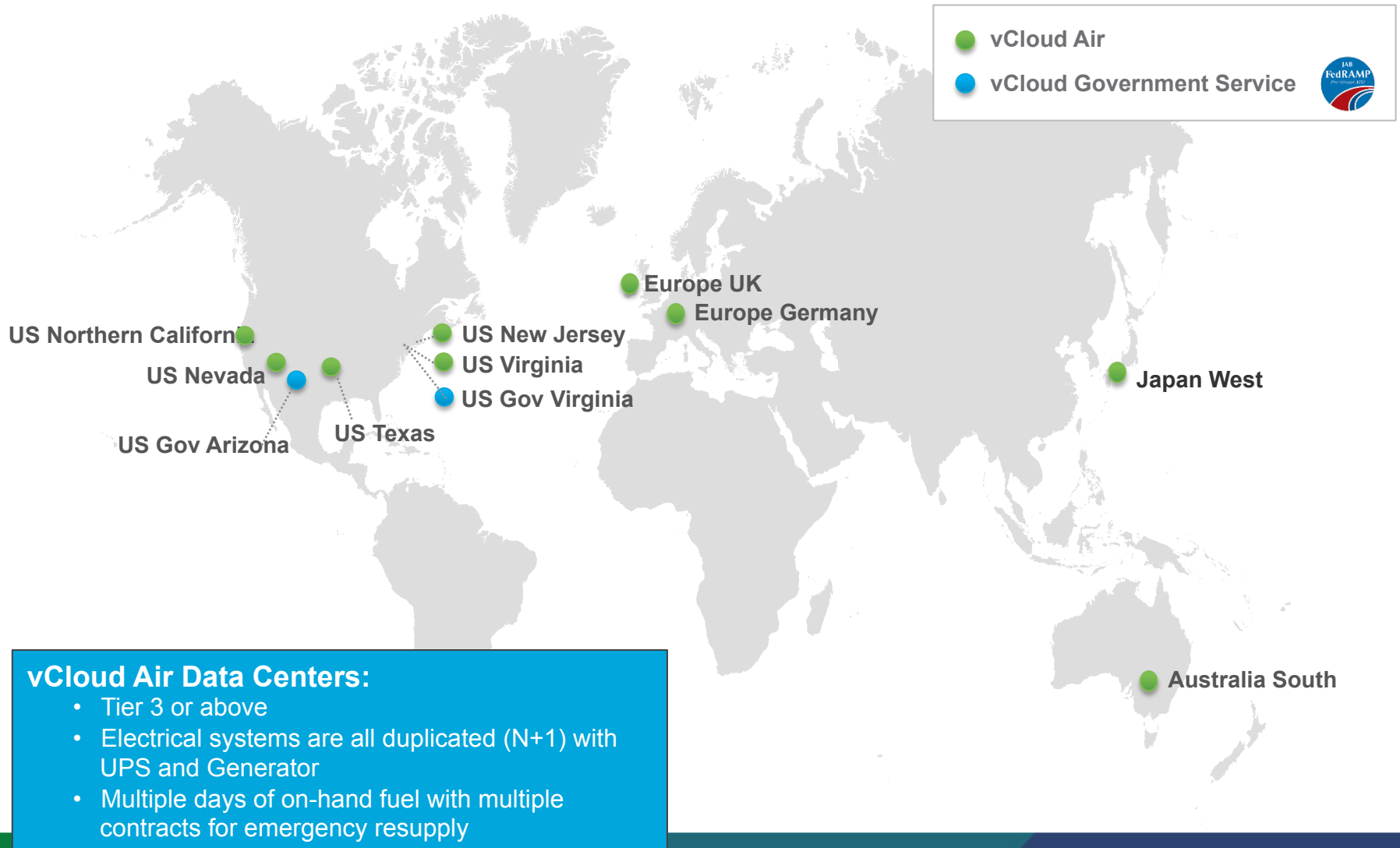|	**Dedicated Cloud** Physically Isolated Your Own Private Cloud Instance	**Virtual Private Cloud** Logically Isolated Guaranteed Resource Allocation	**Virtual Private Cloud OnDemand** Logically Isolated Guaranteed Resource Allocation
Compute	Base Resources: ▪ 240GB vRAM ▪ 35GHz vCPU	Base Resources: ▪ 20GB vRAM ▪ 5GHz vCPU	User Defined: ▪ GB vRAM ▪ GHz vCPU
Storage	Starts at: ▪ 6 TB	Starts at: ▪ 2 TB	User Defined: ▪ GB Standard ▪ SSD- Accelerated Storage
Network	▪ 50 Mbps allocated ▪ 1 Gbps burstable ▪ 3 Public IPs	▪ 10 Mbps allocated ▪ 50 Mbps burstable ▪ 2 Public IPs	User Defined: ▪ Mbps ▪ IPs

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vCloud Air Locations

vCloud Air

vCloud Government Service

US Northern California
US Nevada
US Gov Arizona
US Texas
US New Jersey
US Virginia
US Gov Virginia
Europe UK
Europe Germany
Japan West
Australia South

vCloud Air Data Centers:
- Tier 3 or above
- Electrical systems are all duplicated (N+1) with UPS and Generator
- Multiple days of on-hand fuel with multiple contracts for emergency resupply

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vCloud Air Compliance Certifications

Hybrid Service

ISO 27001:2005

SOC 1 Type 2 (SSAE 16)
SOC 2 Type 2
SOC 3

HIPAA and HITECH Security Rule

Cloud Security Alliance Security Trust and Assurance Registry (CSA STAR)

UK G-Cloud 6

Government Service

FedRAMP Provisional Authority to Operate

Supports US International Traffic in Arms Regulations (ITAR)

Federal Information Processing Standard (FIPS) 140-2

Federal Information Security Management Act

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VMware vCloud Air Service Value Proposition

Silver Bullets

1. No need to re-architect the application

2. 5,700+ applications & 90+ OS explicitly supported on VMware

3. High availability – rest assure your VMs will keep running in the cloud

4. Stay in control – common management for on-premise and off-premise workloads

5. Avoid the unknown, run on infrastructure you already know and tested

"vCloud Hybrid Service was really unique in that it interacted well with the secure, multi-tenant environment we had deployed internally…It's good for mirroring or backing up to a different geographical location for DR purposes."

— Colby Cousens, IT Systems Administrator, City of Melrose

"VMware vCloud Hybrid Service will decrease our spend on capital and reduce management headaches."

— Jerry Sanchez, IT Vice President, Planview

PLANVIEW®

vCloud® Air - Disaster Recovery

April 2014

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vCloud Hybrid Service - Disaster Recovery

Simple and secure asynchronous replication and failover for vSphere

- Warm standby capacity on vCHS
- Self-service protection, failover and failback workflows per VM
- 15 min[1] – 24 hr. recovery point objective (RPO)
- 4 hours or less recovery time objective (RTO)
- Initial data seeding by shipping a disk
- **Includes:**
  - **Unlimited 7-day DR tests per year**
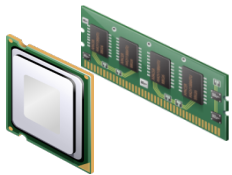 - **30 days of recovered VM run time**

Site A (Primary)

VMware vCenter Server | vSphere Replication

VM | VM | VM | VM | VM | VM

VMware vSphere

Servers

vCloud Hybrid Service, Site B (Recovery)

VM | VM

DR Instance
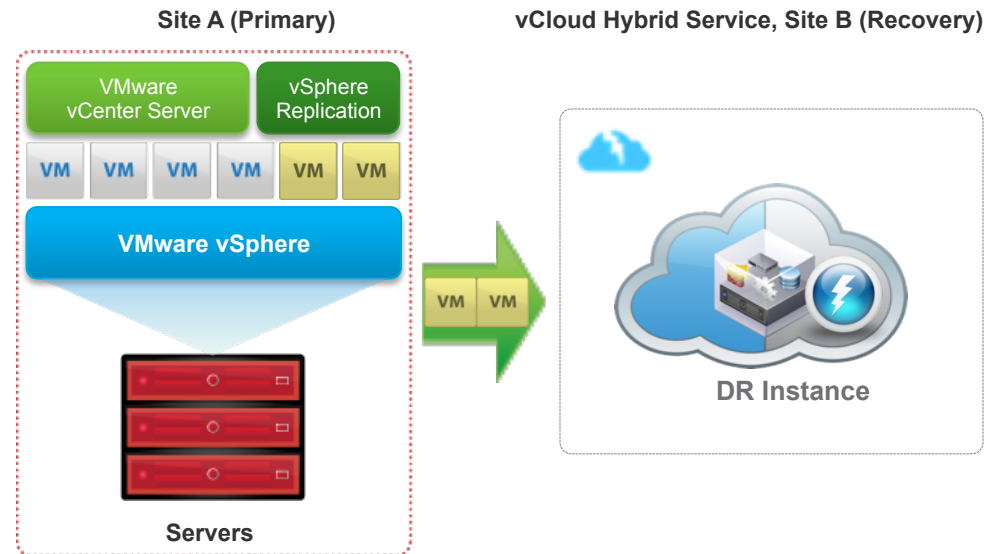
[1]Dependent on available bandwidth

Disaster Recovery – New Core Class of Service

Term Lengths:
1m, 3m, 12m, 24m, 36m subscriptions

Minimum size:
10GHz vCPU
20GB vRAM

Starts at
1 TB
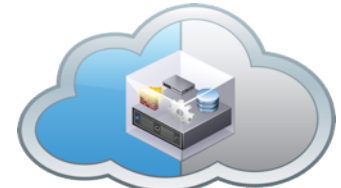
10 Mbps allocated
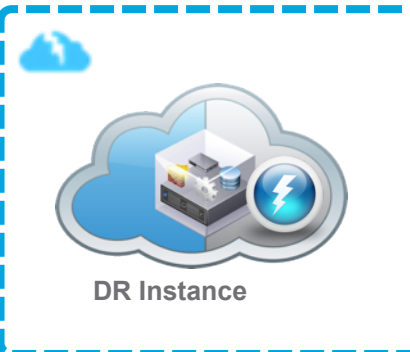2 Public Ips
Unlimited Tests

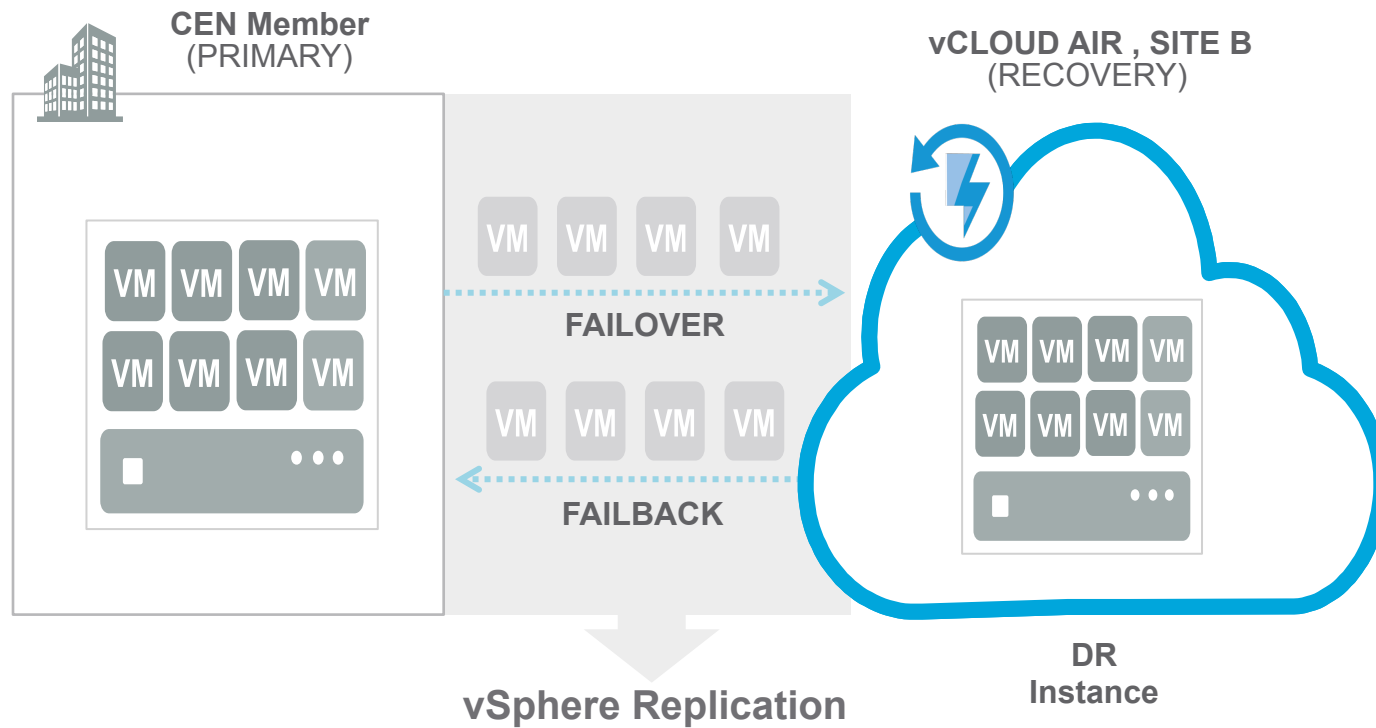**vCloud Air Service Standard Servicer Tiers**
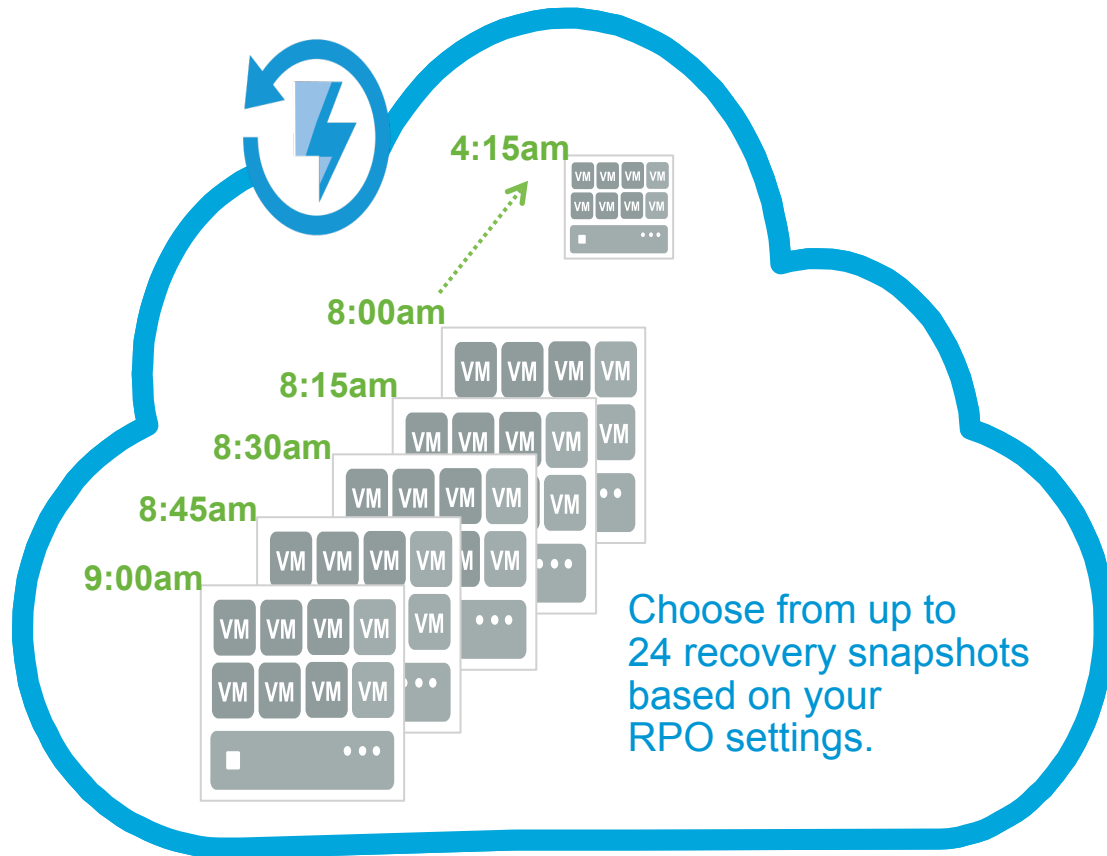
Dedicated Cloud
Instance

Virtual Private
Cloud Instance

**New Instance
Type as DR
Service Tier**

DR Instance

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Failback using vSphere Replication

CEN Member
(PRIMARY)

vCLOUD AIR , SITE B
(RECOVERY)

FAILOVER

FAILBACK

vSphere Replication

DR Instance

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Multiple point in time recovery snapshots

4:15am

8:00am

8:15am

8:30am

8:45am

9:00am

Choose from up to 24 recovery snapshots based on your RPO settings.

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Desktop-as-a-Service

Horizon Air

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What is Horizon Air?

Family of cloud-services from VMware, built on vCloud Air, to deliver virtual desktops, applications, and disaster recovery to end-users on any device, anywhere.
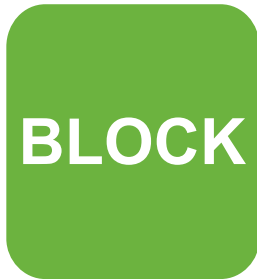

Desktops-as-a-Service

Desktop Disaster Recovery-as-a-Service

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APP
APP

Apps-as-a-Service

®
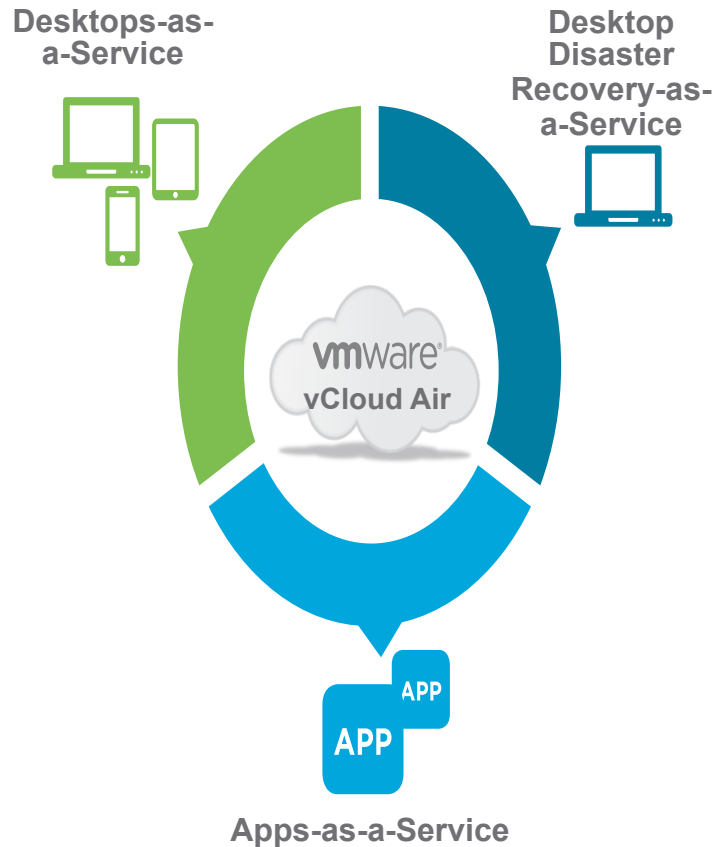
Object Storage

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What is vCloud Air Object Storage?

Store and manage petabytes of unstructured data

Block Storage

BLOCK

- Data is accessed as evenly sized **blocks** (block of data + block no)
- Strong consistency

Use Cases:
- **Structured Databases**
- Transactional data (high IO)
- Persistent Storage for VMs (VMDKs)

VS.

Object Storage

- Data is accessed as **objects** (data+ metadata+ unique identifier)
- Eventual consistency

Use Cases:
- **Unstructured Static files**
- Geo-Dispersed use cases
- Backup/Archiving (built-in resiliency)

Traditional and New Age Use Cases

Disaster Recovery
Backup and Archiving

Long term cost effective storage without performance limits

Web and Mobile Apps
Imaging, Media, Web 2.0

Petabyte scale static data with custom metadata

Extend Existing Apps
Shared Files, Log Files

Data repository shared data across multiple virtual machines/Users

There are two Object Storage Services in vCloud Air….

vCloud Air Object Storage powered by Google Cloud Platform

vCloud Air Object Storage powered by EMC

Difference between the two Object Storage services

Object Storage powered by Google Cloud Platform

- Standard, Nearline, DRA-Durable Reduced Availability storage.

- Very competitively priced offering

- Exabyte Scale Capacity

- Compliance: HIPAA, **ISO/IEC 27001**:2005, SOC 1, SOC 2, **SOC 3**

Object Storage powered by EMC

- Standard and Premium Storage

- Ability to store very large objects (20TB) at scale

- Compliance: HIPAA, SOC 1, SOC 2 Type 1

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Q&A - Next Steps

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